

DIVISION 11

WORK ZONE TRAFFIC CONTROL

SECTION 1101

WORK ZONE TRAFFIC CONTROL GENERAL REQUIREMENTS

1101-1 TRANSPORTATION MANAGEMENT PLAN (TMP)

Maintain traffic through work zones in accordance with these Specifications, the MUTCD, *Roadway Standard Drawings*, 23 CFR 630 Subparts J and K and the Transportation Management Plan (TMP).

Below is a list of the possible TMP components:

- (A) Temporary Traffic Control Plan (TTC),
- (B) Transportation Operations Plan (TO), and
- (C) Public Information Plan (PI).

A TMP will always have a TTC component. The TTC will contain the project notes, phasing, detail sheets and other supporting information typically found in a Traffic Control Plan.

1101-2 TEMPORARY TRAFFIC CONTROL PLAN (TTC)

(A) General

Typically, phasing and drawings govern over project notes, and local notes govern over general notes. If a conflict arises in the Temporary Traffic Control Plan (TTC), refer to Article 105-4.

(B) Phasing

Complete the requirements of each phase before proceeding to the next phase and the requirements of each step before proceeding to the next step, unless the plans permit work to be performed concurrently.

If a TTC phasing is broken into areas, work may be performed in more than one areas simultaneously as described in the plan.

(C) Project Notes

Two types of project notes may be included in the TTC:

- (1) General Notes apply at all times during the project, and
- (2) Local Notes apply only for the specific times and locations that they are referred to in the phasing and detail sheets.

(D) Alternate to Transportation Management Plan

If desired, submit an alternate TMP a minimum of 30 calendar days in advance of the anticipated implementation to allow for adequate review time. Do not implement alternate plans for traffic control until approved in writing and properly sealed. No adjustment in compensation or extension of the completion date(s) will be allowed due to the review time of the alternate. If an alternate TMP is implemented, the Contractor shall be responsible for any unanticipated changes to subsequent phases and steps.

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(E) Temporary Traffic Control Plan Not Fully Covered in the Contract

When the TTC does not cover a particular work function, notify the Engineer to allow for the development or modification of a sealed set of the Temporary Traffic Control Plans.

1101-3 BLASTING ZONE

When blasting operations are within 1,000 ft of a travelway, provide the appropriate traffic control as shown in the plans and/or the *Roadway Standard Drawings*.

1101-4 CONSTRUCTION VEHICLE CROSSINGS

Do not cross the median, ramps or loops with vehicles or equipment unless a specific location for crossing is approved and required traffic control devices are used as shown in the *Roadway Standard Drawings*.

1101-5 ON-ROAD CONSTRUCTION VEHICLES

When operating outside of a closed lane or haul road crossing in a work zone, on-road construction vehicles are subject to the Department's Division of Motor Vehicle weight and safety regulations as commercial vehicles.

1101-6 EXCAVATIONS WITHIN TRAVELWAY

During the process of excavating in a travelway where traffic is to be later maintained, make provisions to backfill and repair any excavated or damaged pavement before allowing traffic to proceed over the affected lanes. In low speed areas (35 mph or less), metal plates may be used to cover excavated areas.

1101-7 HAULING OPERATIONS

Comply with the multiple and single vehicle hauling restrictions as shown in the plans when performing hauling of equipment or materials to or from the project.

Define "Multiple Vehicle Hauling" as the hauling of equipment or materials to or from the project with delivery at intervals of less than 5 minutes or results in more than one vehicle at a particular work site at a time.

Define "Single Vehicle Hauling" as the hauling of equipment or materials to or from the project with delivery at intervals of more than 5 minutes and results in no more than one vehicle at a particular work site at a time.

1101-8 MATERIAL AND EQUIPMENT STORAGE AND PARKING

When work is not in progress, keep all personnel, equipment, machinery, tools, construction debris and supplies at least 40 ft away from active travel lanes. When vehicles, equipment and materials are protected by concrete barrier or guardrail, they shall be offset at least 5 ft from the barrier or guardrail.

1101-9 PARKING OF PERSONAL VEHICLES

Provide staging areas for personal vehicle parking a safe distance, at least 40 ft, from open travel lanes except on freeway facilities. Provide staging areas for parking personal vehicles on freeway facilities approved by the Engineer before use.

1101-10 PROTECTION OF HAZARDS

Mark all hazards with signs, barricades, drums or other warning devices.

At each location where work is started which creates a safety hazard, continue the work until completed to the extent that the safety hazard is eliminated. If the work is not pursued in a continuous manner the Engineer will not allow any other work on the project to be performed until the existing safety hazard is eliminated.

1101-11 TEMPORARY LANE CLOSURES**(A) General**

Operate all equipment and personnel within the designated work area during lane closures. Do not impede or stop traffic for the purpose of performing construction related work on the traffic side of the lane closure, except when called for in the Traffic Control Plan.

Install lane closures with the traffic flow, beginning with devices on the upstream side of traffic. Remove lane closures against the traffic flow, beginning with devices on the downstream side of traffic.

Vehicles used to install or remove lane closures shall have flashing or rotating beacons.

(B) Intersections

When construction proceeds through an intersection, provide flaggers and all other necessary traffic control as required by the plans to direct the traffic through the intersection. When an intersection is signalized, ensure authorized personnel place the signal in flash mode before beginning work in the intersection.

1101-12 TEMPORARY ROAD CLOSURES**(A) Traffic Pattern Alternations**

Notify the Engineer 21 calendar days before altering the existing traffic pattern.

Plan all traffic pattern alterations and meet with the Engineer to discuss the implementation strategy before altering traffic. The Engineer will notify the proper authorities and other affected parties as necessary.

(B) Detour

Ensure that all required detour signing and delineation, including work done by others, are in place before placing traffic onto a detour.

(C) Traffic Stoppage

Limit the stoppage of traffic to times specified in the plans. Provide time between consecutive stoppages to allow the traffic queue to deplete.

1101-13 TRAFFIC CONTROL SUPERVISION

Provide the service of at least one qualified work zone supervisor. The work zone supervisor shall have the overall responsibility for the proper implementation of the traffic management plan and ensure all employees working inside the NCDOT right of way have received the proper training appropriate to the job decisions each individual is required to make.

The work zone supervisor is not required to be on site at all times but shall be available to address concerns of the Engineer. The name and contact information of the work zone supervisor shall be provided to the Engineer prior to or at the preconstruction conference.

Qualification of work zone supervisors shall be done by an NCDOT approved training agency or other approved training provider. For a complete listing of these, see the Work Zone Traffic Control's webpage.

Coordinate with and cooperate with traffic control supervisors of adjacent or overlapping construction projects to insure safe and adequate traffic control is maintained throughout the projects at all times including periods of construction inactivity in accordance with Article 105-7.

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1101-14 VEHICULAR ACCESS

Maintain continuous and safe vehicular access, including but not limited to, all residences, businesses, schools, police and fire stations, hydrants, other emergency services, hospitals and mailboxes. Conduct operations so as to limit the inconvenience to property owners.

1101-15 PEDESTRIAN ACCESS

Maintain pedestrian access at all times as shown in the plans. When existing pedestrian facilities are disrupted, closed or relocated, provide temporary facilities that are detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Avoid pedestrian detours.

Determine the extent of pedestrian needs through engineering judgment or by the traffic control supervisor responsible for the work zone. Inspect the work zone regularly so effective pedestrian traffic is maintained.

When pedestrian movement through or around a work site is necessary, provide a separate usable footpath. If the previous pedestrian facility was accessible to pedestrians with disabilities, provide a footpath during temporary traffic control that is accessible. Do not have any abrupt changes in grade or terrain that could cause a tripping hazard or could be a barrier to wheelchair use. Provide barriers and channelizing devices that are detectable to pedestrians who have visual disabilities. Provide temporary pedestrian facilities that are made of concrete, asphalt or other suitable material as approved by the Engineer at all locations where the existing sidewalks have been removed for construction operations.

Do not sever or move pedestrian facilities for non-construction activities such as parking for vehicles and equipment. Separate pedestrian movements from both work site activity and vehicular traffic.

SECTION 1105 TEMPORARY TRAFFIC CONTROL DEVICES

1105-1 DESCRIPTION

Furnish, install, maintain, relocate and remove temporary traffic control devices. All temporary traffic control devices furnished by the Contractor shall remain the property of the Contractor, unless otherwise specified in the contract.

1105-2 MATERIALS

Refer to Division 10.

Use temporary traffic control devices that comply with 23 CFR 630 Subpart K. Provide a Type 7 material certifications in accordance with Article 106-3 at least 72 hours before use for all used temporary traffic control devices.

Provide temporary traffic control devices that are listed on the NCDOT Approved Product List.

1105-3 CONSTRUCTION METHODS

Ensure all temporary traffic control devices are inspected and approved before using them on the project. Install temporary traffic control devices before construction operations begin and during the proper phase of construction. Maintain and relocate temporary traffic control devices during the time they are in use. Keep these devices in place as long as they are needed and immediately remove thereafter. When operations are performed in stages, install only those devices that apply to the present conditions.